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PROCESS OF MAKING POLYMERIC HYDROGELS
BY REACTIVE EXTRUSION

Abstract

What is described is a reactive extrusion process of making a polymeric hydrogel of a polymeric anhydride or acid, e.g. maleic anhydride or maleic acid polymer, or copolymer thereof, crosslinked with a crosslinking agent containing at least 2 crosslinkable groups, particularly, $-OH$ or $-NH_2$, or both. The reaction product is a crosslinked polymeric ester or amide/imide, or both, suitably having a mole ratio of $-OH$, or $-NH_2$, to $-COOH$, of 1:10 to 10:1, preferably 2:10 to 7:1. The hydrogel is particularly swellable in water, e.g. $> 100\%$ in 1 hour in aqueous media; and forms a thin, tacky layer on a substrate, which property is useful in bioadhesive products.